22. (New) The method of claim 1, wherein said contacting is in the presence of HDAC3 and wherein detection of an increase of deacetylated RelA in the presence of ~~by~~ the candidate agent and HDAC2 is compared to a level of deacetylated RelA in the absence of the candidate agent and the presence of HDAC3.

23. (New) The method of claim 8, wherein the extract comprises p300 and CBP.

24. (New) The method of claim 23, wherein the extract comprises HDAC3.

REMARKS UNDER 37 C.F.R. § 1.111

Formal Matters

Claims 1-10 and 19-24 are pending after entry of the amendments above.

Claims 11-20 are canceled without prejudice as being directed to a non-elected group.

Claims 1-7 are amended for clarity.

New claims 19-24 are added.

Support for the amendments presented herein is found, for example, in the claims as originally filed, as well as in the specification at, for example, paragraphs 47, 54, 57, 63, 68, and 117.

The specification is amended at paragraph 11 to correct a typographical error by removing a comment from an earlier draft version of the specification.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached is captioned "**VERSION WITH MARKINGS TO SHOW CHANGES MADE.**"

Applicant respectfully requests reconsideration of the application in view of the amendments and remarks made herein.

No new matter has been added.

[redacted]

Restriction Requirement

The Office Action restricted the claims as follows:

Group I: Claims 1-10, drawn to methods for identifying an agent that modulates NF-kB activity by detecting deacetylation of RelA;

Group II: Claim 11, drawn to inhibiting transcription of genes in a higher eukaryotic cell comprising contacting the cell with an agent that specifically deacetylates RelA;

Group III: Claim 12, drawn to an agent that specifically deacetylates RelA;

Group IV: Claims 13-14, drawn to a pharmaceutical composition and method of treatment of a pathological condition comprising an agent that specifically deacetylates RelA; and

Group V: Claims 15-18, drawn to methods of identifying an agent that modulates NF-kB activity by detecting acetylation of RelA.

Applicants hereby elect the claims of Group I without traverse.

Applicants expressly reserve the right under 35 USC §121 to file a divisional application directed to the non-elected subject matter or any subject matter disclosed in this application during the pendency of this application.

[redacted]

Conclusion

Applicant submits that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815, order number UCAL-234.

Respectfully submitted,
BOZICEVIC, FIELD & FRANCIS LLP

Date: Sep 3, 2002

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[redacted]

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

[0011] [[Greene wanted to delete this entire paragraph]]There is a need for compositions and methods to modulate NF-κB activity, particularly agents that modulate NF-κB activity through a mechanism or pathway different from the NF-κB modulating agents currently available. Providing such agents expands the scope of methods for treating conditions associated with dysregulation of NF-κB activity, thus ultimately providing the clinician and the patient with alternative therapies. Thus, there is a need for methods for identifying agents that can modulate NF-κB activity through, for example, a pathway other than that involving regulation of interaction with IκBα and its components, or other extranuclear pathway. The present invention addresses this need.

IN THE CLAIMS

[NOTE: Underlined text is to be added. Strikethrough text is to be deleted.]

1. **(Amended)** A method for identifying an agent that modulates NF-κB activity in transcription of a gene in a eukaryotic cell, the method comprising:

contacting ~~a RelA protein with~~ a candidate agent in vitro **with acetylated RelA, deacetylated RelA, or both acetylated and deacetylated RelA** ~~for a time sufficient to allow for deacetylation of RelA by the agent~~; and

detecting ~~deacetylation of~~ **deacetylated** RelA;

wherein detection of ~~deacetylation of~~ **an increase of deacetylated** RelA **in the presence of** ~~by~~ the candidate agent **compared to a level of deacetylated RelA in the absence of the candidate agent** indicates that the agent inhibits activity of NF-κB in gene transcription.

2. **(Amended)** The method of claim 1, wherein RelA is detectably labeled so that deacetylation results in release of the detectable label from RelA, and **said** detecting ~~deacetylation~~ of **deacetylated** RelA is by detecting a decrease in detectably labeled RelA.

[redacted]

3. **(Amended)** The method of claim 1, wherein RelA is detectably labeled so that deacetylation results in release of the detectable label from RelA, and **said** detecting ~~deacetylation~~ of **deacetylated RelA** is by detecting released detectable label.

4. **(Amended)** The method of claim 1, wherein said detecting of ~~deacetylation of~~ **deacetylated** RelA is compared to ~~deacetylation of~~ **a level of deacetylated** RelA in the presence of histone deacetylase 3 (HDAC3).

5. **(Amended)** The method of claim 1, wherein RelA is within a eukaryotic cell and detecting of ~~deacetylation of~~ **deacetylated** RelA is by detection of export of RelA from the nucleus, wherein detection of RelA export indicates RelA is deacetylated.

6. **(Amended)** The method of claim 1, wherein RelA is within a eukaryotic cell and detecting of ~~deacetylation of~~ **deacetylated** RelA is by detection of an increase in RelA binding to IκBα.

7. **(Amended)** A method for identifying a substance that inhibits NF-κB activity, comprising testing a substance for its ability to ~~deacetylate RelA~~ **activity in deacetylation RelA or inhibiting RelA acetylation, the method comprising the steps of** ~~by~~:

exposing a sample comprising RelA to a test substance;

comparing ~~acetylation of RelA~~ **deacetylated RelA** in the sample comprising the test substance to acetylation of RelA in a sample without the test substance; and

determining whether the test substance **provides for a level of deacetylated RelA greater than a level of deacetylated RelA in the absence of the test substance** ~~specifically promotes deacetylation of RelA~~;

wherein activity of the test substance in ~~deacetylation of~~ **increasing deacetylated** RelA indicates the test substance inhibits NF-κB activity.

[redacted]